

Project Type	Bridges													Barriers								
	Horiz. Align.	Vert. Align.	Lane Width	Shldr Width (13)	On/Off Conn.	Median Width	Cross Slope Lane	Cross Slope Shldr	Fill/Ditch Slopes	Clear Zone	Sign. (10)	Delini. (9)	Illumin.	Vert. Clear. (11)	Bike & Ped.	Lane Width	Shldr Width	Structural Capacity	Term. & Trans. Section (12)	Sid Run	Bridge Rail (14)(19)	
Design Elements ⇨																						
(1-1) Preventive Maintenance																						
Pavement Restoration																						
(1-2) Diamond Grinding																						
(1-3) Milling with HMA Inlays																						
(1-4) Nonstructural Overlay																						
Pavement Rehab./Resurf.																						
(1-5) HMA Structural Overlays	EU	DE	F	F	F(17)	DE	F	EU	F	F	F	F	F	F	F	F	F	F	F	F	F	
(1-6) PCCP Overlays	EU	DE	F	F	F(17)	DE	F	EU	F	F	F	F	F	F	F	F	F	F	F	F	F	
(1-7) Dowel Bar Retrofit	EU	DE	F	F	F(17)	DE	DE		F	F	F	F	DE		F	F	F	F	F	F	F	
Bridge Rehabilitation																						
(1-8) Bridge Deck Rehabilitation																						
Safety																						
(1-9) Median Barrier																						
(1-10) Guardrail Upgrades																						
(1-11) Bridge Rail Upgrades																						
Reconstruction (16)																						
(1-12) New/Reconstruction	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	

- Not Applicable
- F** Full design level. See Chapter 440.
- DE** Design Exception to full design level.
- EU** Evaluate Upgrade to full design level.
- (6) Applies only to bridge end terminals and transition sections.
- (9) Continuous shoulder rumble strips required in rural areas. See Chapter 700.
- (10) See Chapter 820.
- (11) See Chapter 1120.
- (12) Impact attenuators are considered as terminals.
- (13) See Chapters 440 and 640.
- (14) Includes crossroad bridge rail. See Chapter 710.
- (16) For design elements not in the matrix headings, apply full design level as found in the applicable chapters and see 325.03(2).
- (17) DE for existing acceleration/deceleration lanes when length meets posted freeway speed and no significant accidents. See Chapter 940.
- (19) The funding sources for bridge rail are a function of the length of the bridge. Consult programming personnel. Applies to median elements only.
- (20) Upgrade barrier, if necessary, within 200 ft of the end of the bridge.
- (23) See description of Guardrail Upgrades Protect. Type. 325.03(1) regarding length of need.

Design Matrix 1
Interstate Routes (Main Line)
Figure 325-3